

AMENDMENTS TO THE CLAIMS

1-16. (Cancelled)

17. (New) A sample volume defining device for separating and diluting a small defined volume of a liquid sample, said device comprising:

(a) a first body comprising at least one cavity with a defined volume on a surface of said first body, said cavity having an open end and an opposing closed end; said first body being slidable between a first location and a second location; and

(b) a second body having a surface complementary with and abutting against said surface of said first body in a manner, when said first body being in said first location, an area of said surface of said first body around said cavity not being in contact with said surface of said second body and being available for applying said liquid sample thereon, and a pair of channels extending through said second body, each of said channels having an opening on said surface of said second body; when said first body being in said second location, said pair of channels being in fluid communication with said cavity of said first body;

when said first body is slid from said first location to said second location, an edge of said second body, abutting said surface of said first body, scrapes off an excessive volume of said liquid sample applied over said cavity and on said area, and leaves within said cavity a volume of said liquid sample equal to said defined volume of said cavity; and at said second

location, said pair of channels of said second body are in fluid communication with said cavity, enabling directing a flow of a diluting fluid from one of said channels to flush said liquid sample retained in said cavity through another of said channels to form a diluted sample.

18. (New) The device of claim 17 further comprising two receptacles, each connecting with one of said channels, and one of said receptacles containing a defined volume of said diluting fluid.

19. (New) The device of claim 18, wherein said diluted sample has a defined dilution ratio.

20. (New) The device of claim 17, wherein said defined volume of said cavity is from 0.02 to 20 μ l.

21. (New) The device of claim 17, wherein said openings of said pair of channels are converged.

22. (New) The device of claim 17, wherein said channels of said second body are in fluid communication.

23. (New) The device of claim 17, wherein said second body further comprises a sealing element disposed in a recess on said surface abutting against said first body; said sealing element having an aperture aligned with said openings of said pair of channels, providing a seal around said openings of said channels.

24. (New) The device of claim 23, wherein a portion of said sealing element between said aperture and an edge facing said cavity when said first body is in said first position has a width exceeding a corresponding width of said cavity.

25. (New) The device of claim 17 further comprising a second cavity with a second defined volume on said surface of said first body, said second cavity having an open end and an opposing closed end; and said second body including a second pair of channels extending through said second body, each thereof having an opening on said surface of said second body; when said first body being in said second location, said second pair of channels being in fluid communication with said second cavity of said first body; said second body abutting against said surface of said first body in a manner, when said first body being in said first location, an area of said surface of said first body around said second cavity not being in contact with said surface of said second body and being available for applying said liquid sample thereon;

wherein when said first body is slid from said first location to said second location, said edge of said second body scrapes off an excessive volume of said liquid sample applied

over said second cavity and on said area around said second cavity, and leaves within said second cavity a volume of said liquid sample equal to said second defined volume; and at said second location, said second pair of channels are in fluid communication with said second cavity, enabling directing a flow of said diluting fluid from one of said second pair of channels to flush said liquid sample retained in said second cavity through another of said second pair of channels to form a second diluted sample.

26. (New) The device of claim 25, wherein said first cavity and said second cavity have different volumes.

27. (New) The device of claim 25, wherein said second body further comprises a sealing element disposed in a recess on said surface abutting against said first body; said sealing element having two apertures, each aligned with said openings of each of said pairs of channels, providing seals around said openings of each of said pairs of channels.

28. (New) A method of separating and diluting a small defined volume of a liquid sample comprising:

(a) providing a device comprising a first body including at least one cavity with a defined volume on a surface of said first body, said cavity having an open end and an opposing closed end; said first body being slidable between a first location and a second location; and a second body having a surface complementary with and abutting against said

surface of said first body, and a pair of channels extending through said second body, each of said channels having an opening on said surface of said second body; when said first body being in said second location, said pair of channels being in fluid communication with said cavity of said first body;

(b) applying a relatively large undefined volume of said liquid sample in said cavity, with an excessive volume over said cavity and onto an area of said surface of said first body around said cavity;

(c) sliding said first body from said first location to said second location, thereby an edge of said second body, abutting against said surface of said first body, scraping off said excessive volume of said liquid sample over said cavity and leaving within said cavity a volume of said liquid sample equal to said defined volume of said cavity; and

(d) flushing said defined volume of said liquid sample retained in said cavity by a flow of a diluting fluid from one of said channels out of said cavity and through another of said channels to form a diluted sample.

29. (New) The method of claim 28, wherein said diluting fluid has a defined volume, and said diluted sample has a defined dilution ratio.

30. (New) The method of claim 28, wherein said device further comprising a second cavity with a second defined volume on said surface of said first body, said second cavity having an open end and an opposing closed end; and said second body including a

second pair of channels extending through said second body, each thereof having an opening on said surface of said second body; when said first body being in said second location, said second pair of channels being in fluid communication with said second cavity; and wherein said method further comprises:

in (b) applying a second relatively large undefined volume of said liquid sample in said second cavity, with an excessive volume over said second cavity and on an area of said surface of said first body around said second cavity;

in (c) when sliding said first body from said first location to said second location, said edge of said second body scrapes off said excessive volume of said liquid sample over said second cavity, and leaving within said second cavity a volume of said liquid sample equal to said second defined volume of said second cavity; and

in (d) flushing said second defined volume of said liquid sample retained in said second cavity by a flow of said diluting fluid from one of said second pair of channels out of said second cavity and through another of said second pair of channels to form a second diluted sample.

31. (New) The method of claim 30, wherein said diluted samples have two different dilution ratios.